

WHAT IS CLAIMED IS:

1. A phase shift mask, comprising:  
a substrate having an engraved portion  
and a non-engraved portion, said engraved portion  
5 having a side wall and a bottom face; and  
a light blocking film provided in a  
portion of the bottom face and the side wall of  
said engraved portion,  
wherein the size to be defined by  
10 subtracting a thickness of the light blocking film  
at the side wall from a width of said engraved  
portion is equal to 1.3 to 2.4 times the width of  
a light transmitting portion provided at said  
engraved portion.

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2. A phase shift mask according to Claim 1,  
wherein the size to be defined by subtracting a  
thickness of the light blocking film at the side  
wall from a width of said engraved portion is  
20 equal to 1.4 to 1.8 times the width of a light  
transmitting portion provided at said engraved  
portion.

3. A phase shift mask according to Claim 1,  
25 wherein the thickness of the light blocking film  
provided at the side wall of said engraved portion  
is equal to 1/20 to 3/5 times the width of the

light transmitting portion provided at said engraved portion.

4. A phase shift mask according to Claim 2,  
5 wherein the thickness of the light blocking film provided at the side wall of said engraved portion is equal to 7/20 to 11/20 times the width of the light transmitting portion provided at said engraved portion.

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5. A phase shift mask according to Claim 1,  
wherein the width of said engraved portion is equal to 2.5 times or more the width of the light transmitting portion provided at said engraved  
15 portion.

6. A phase shift mask according to Claim 1,  
wherein a depth of said engraved portion is determined so that a phase difference,  
20 corresponding to a product of 180 deg. by an odd number, is produced between light from the light transmitting portion of said engraved portion and light from said non-engraved portion.

25 7. A phase shift mask according to Claim 1,  
wherein the light transmitting portion provided at said engraved portion and a light transmitting

portion defined at said non-engraved portion have a line-like shape.

8. An exposure method, comprising the  
5 steps of:

preparing a phase shift mask;  
illuminating the phase shift mask; and  
projecting a pattern of the phase shift  
mask onto a substrate,

10 wherein the phase shift mask includes  
(i) a substrate having an engraved portion and a  
non-engraved portion, the engraved portion having  
a side wall and a bottom face, and (ii) a light  
blocking film provided in a portion of the bottom  
15 face and the side wall of the engraved portion,  
wherein the size to be defined by subtracting a  
thickness of the light blocking film at the side  
wall from a width of the engraved portion is equal  
to 1.3 to 2.4 times the width of a light  
20 transmitting portion provided at the engraved  
portion.

9. A device manufacturing method,  
comprising the steps of:

25 preparing a phase shift mask;  
illuminating the phase shift mask;  
projecting a pattern of the phase shift

mask onto a substrate; and  
developing the substrate,  
wherein the phase shift mask includes  
(i) a substrate having an engraved portion and a  
5 non-engraved portion, the engraved portion having  
a side wall and a bottom face, and (ii) a light  
blocking film provided in a portion of the bottom  
face and the side wall of the engraved portion,  
wherein the size to be defined by subtracting a  
10 thickness of the light blocking film at the side  
wall from a width of the engraved portion is equal  
to 1.3 to 2.4 times the width of a light  
transmitting portion provided at the engraved  
portion.